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**ABSTRACT OF THE DISCLOSURE**

A system for use by a computer to determine which network addresses are being used by other computers or other devices in a network includes an address inquiry message packet generator module configured to enable the computer to transmit address inquiry message packets over a network in one or more iterations. Each address inquiry message packet includes a network address. The address inquiry message packet generator module is configured to enable the computer to transmit address inquiry message packets for a selected number of network addresses during each iteration. An iteration control module is configured to control the timing of successive iterations of transmission of address inquiry message packets by the computer in relation to reception by the computer of response message packets responding to the address inquiry message packets. The iteration control module is configured to enable the computer to provide at least a minimum time period for each iteration, and to extend the time period if the computer receives response message packets during the iteration. In addition, the iteration control module is configured to adjust the minimum time period in relation to the time delay between the time the computer transmits address inquiry message packets and the time it receives respective address inquiry message packets responsive thereto. In addition, after receiving a response message packet from a device, the computer can determine predetermined characteristics in connection therewith, including whether it is running a port mapper.